

09/956994

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



GJC

Patent No.: 7,315,295

Issue Date: January 1, 2008

Inventor(s): Mutsumi KIMURA

Title: DRIVING METHOD FOR ELECTRO-OPTICAL DEVICE, ELECTRO-OPTICAL DEVICE, AND ELECTRONIC APPARATUS

Docket No.: 110423

**REQUEST FOR CERTIFICATE OF CORRECTION UNDER RULE 322**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

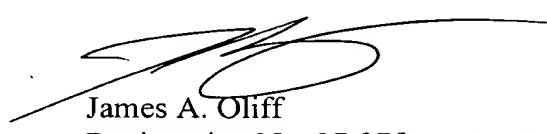
It is respectfully requested that a Certificate of Correction be issued in order to correct the errors specified in the attached copy of Certificate of Correction Form PTO-1050.

Applicant filed an Amendment After Allowance under 37 C.F.R. §1.312 on April 18, 2007, and a Request for Continued Examination on May 18, 2007 to force entry and consideration of the claim amendments submitted in the §312 Amendment. A Notice of Allowance issued June 18, 2007 indicating the claim amendments were entered and allowable. However, Patent No. 7,315,295 does not reflect the amended claims.

It is believed that the errors are on the part of the Patent and Trademark Office, and therefore no fee is due in relation to this matter in accordance with the provisions of 37 C.F.R. §1.322. However, should any fee be due, please charge the same against Deposit Account No. 15-0461 in order to ensure prompt issuance of a Certificate of Correction.

Respectfully submitted,

**Certificate  
FEB 19 2008  
of Correction**



James A. Oliff  
Registration No. 27,075

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James E. Golladay, II  
Registration No. 58,182 FEB 19 2008

JAO:JEG/clf

Date: February 14, 2008

**OLIFF & BERRIDGE, PLC**

P.O. Box 320850

Alexandria, Virginia 22320-4850

Telephone: (703) 836-6400

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**UNITED STATES PATENT AND TRADEMARK OFFICE**  
**CERTIFICATE OF CORRECTION**

PATENT NO. : 7,315,295

DATED : January 1, 2008

INVENTOR(S) : Mutsumi KIMURA

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

1. A driving method for an electro-luminescent device which includes, corresponding to an intersection of a scanning line and a data line, an electro-luminescent element, a driving transistor that controls a current flowing through the electro-luminescent element, the electro-luminescent element emitting light by the current and a switching transistor that controls the driving transistor, the driving method comprising:

a setting step, performed during a first sub horizontal scanning period of a horizontal scanning period, of supplying a first on-signal to the switching transistor via the scanning line, and of supplying a set signal to select a conducting state or a non-conducting state of the driving transistor to the driving transistor via the data line and the switching transistor in accordance with a period for which the first on-signal is supplied;

a resetting step, performed during a second sub horizontal scanning period of the horizontal scanning period, of supplying a second on-signal to the switching transistor via the scanning line, and of supplying a reset signal to select the non-conducting state of the driving

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 P.O. Box 320850  
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transistor to the driving transistor via the data line and the switching transistor in accordance with a period for which the second on-signal is supplied,

wherein the period for which the first on-signal is supplied coincides with a period for which the set signal is supplied.

2. The driving method for an electro-luminescent device according to claim 1, further including performing the setting step in a first horizontal scanning period, and performing the resetting step in a second horizontal scanning period.

3. The driving method for an electro-luminescent device according to claim 1, further including obtaining a gray-scale by performing a plurality of set-reset operations, each set-reset operation including the setting step and the resetting step.

4. The driving method for an electro-luminescent device according to claim 3, further including providing a time interval between the setting step and the resetting step that is different for each of the plurality of set-reset operations.

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5. The driving method for an electro-luminescent device according to claim 3, further including providing the time interval between the setting step and the resetting step for each of the plurality of set-reset operations to be completely different from each other, and the ratio of time intervals for the plurality of set-reset operations being set to be about 1:2: ... :2<sup>n</sup> (n is an integer of one or more) based on the minimum time interval.

6. The driving method for an electro-luminescent device according to claim 1, further including providing the set signal to be a signal for setting the conducting state for the driving transistor rather than the signal for selecting the conducting state or the non-conducting state of the driving transistor.

7. The driving method for an electro-luminescent device according to claim 1, further including driving the electro-luminescent element including an organic electro-luminescence element.

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

8. An electro-luminescent device driven by the driving method according to claim 1.

9. An electro-luminescent device, comprising:

a scanning line;

a data line;

an electro-luminescent element corresponding to an intersection of the scanning line

and the data line;

a driving transistor that controls a current flowing through the electro-luminescent element, the electro-luminescent element emitting light by the current;

a switching transistor that controls the driving transistor; and

a drive circuit that generates a signal to set the switching transistor to be an on-state or an off-state, and that generates a set signal to set the driving transistor during a first sub horizontal scanning period of a horizontal scanning period or a reset signal to reset the driving transistor during a second sub horizontal scanning period of the horizontal scanning period in

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

accordance with the signal to set the switching transistor to be the on-state or the off-state,  
 wherein the drive circuit is configured to supply a first on-signal to the switching  
 transistor during a period that coincides with a period for which the set signal is supplied.

10. An electro-luminescent device, comprising:

a scanning line;

a data line;

an electro-luminescent element corresponding to an intersection at the scanning line

and the data line;

a driving transistor that controls a current flowing through the electro-luminescent  
 element, the electro-luminescent element emitting light by the current;

a switching transistor that controls the driving transistor;

a scanning line driver that supplies a signal to set the switching transistor to be an  
 on-state or an off-state to the scanning line; and

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a data line driver that supplies a set signal to set the driving transistor during a first sub horizontal scanning period of a horizontal scanning period or a reset signal to reset the driving transistor during a second sub horizontal scanning period of the horizontal scanning period to the data line in accordance with an operation of the scanning line driver,

wherein the data line driver is configured to supply the reset signal within a vertical scanning period during a period that is substantially constant, and

the scanning line driver is configured to supply a first on-signal to the switching transistor during a period that coincides with a period for which the set signal is supplied.

11. An electro-luminescent device, comprising:

a scanning line;

a data line;

an electro-luminescent element corresponding to an intersection of the scanning line and the data line;

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

a driving transistor that controls a current flowing through the electro-luminescent element, the electro-luminescent element emitting light by the current; and

a switching transistor that controls the driving transistor, an on-signal to perform a setting step of setting the electro-luminescent element during a first sub horizontal scanning period of a horizontal scanning period and a resetting step of resetting the electro-luminescent element during a second sub horizontal scanning period of the horizontal scanning period being supplied to the switching transistor via the scanning line,

wherein a number of the signal to perform the setting step and a number of the signal to perform the resetting step are substantially the same, and

the switching transistor is configured to supply a first on-signal to the switching transistor during a period that coincides with a period for which the set signal is supplied.

12. The electro-luminescent device according to claim 9, the electro-luminescent element including an organic electro-luminescence element.

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13. An electronic apparatus, comprising:

the electro-luminescent device set forth in claim 8.

14. A driving method for an electro-luminescent device which includes, corresponding to an intersection of a scanning line and a data line, an electro-luminescent element, a driving transistor that controls a current flowing through the electro-luminescent element, the electro-luminescent element emitting light by the current and a switching transistor that controls the driving transistor, the driving method comprising:

a setting step, performed during a first sub horizontal scanning period of a horizontal scanning period, of supplying a first on-signal to the switching transistor via the scanning line, and of supplying a set signal to select a conducting state or a non-conducting state of the driving transistor to the driving transistor via the data line and the switching transistor in accordance with a period for which the first on-signal is supplied; and

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a resetting step, performed during a second sub horizontal scanning period of the horizontal scanning period, of supplying a second on-signal to the switching transistor via the scanning line, and of supplying a reset signal to select the non-conducting state of the driving transistor to the driving transistor via the data line and the switching transistor in accordance with a period for which the second on-signal is supplied, the setting step and the resetting step forming a set-reset operation,

wherein a plurality of the set-reset operations are performed within one frame period, at least two set-reset operations of the plurality of the set-reset operation having mutually different time lengths and

the period for which the first on-signal is supplied coincides with a period for which the set signal is supplied.

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15. An electro-luminescent device, comprising:

a scanning line;

a data line;

an electro-luminescent element corresponding to an intersection of the scanning line

and the data line;

a driving transistor that controls a current flowing through the electro-luminescent element, the electro-luminescent element emitting light by the current;

a switching transistor that controls the driving transistor; and

a drive circuit that generates an on-signal to perform a setting step of setting the electro-luminescent element during a first sub horizontal scanning period of a horizontal scanning period and a resetting step of resetting the electro-luminescent element during a second sub horizontal scanning period of the horizontal scanning period supplied to the switching transistor via the scanning line,

wherein a plurality of pairs of the setting step and the resetting step are performed within one frame period, and

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a period for which a first on-signal is supplied to the switching transistor coincides with a period for which a set signal is supplied.

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